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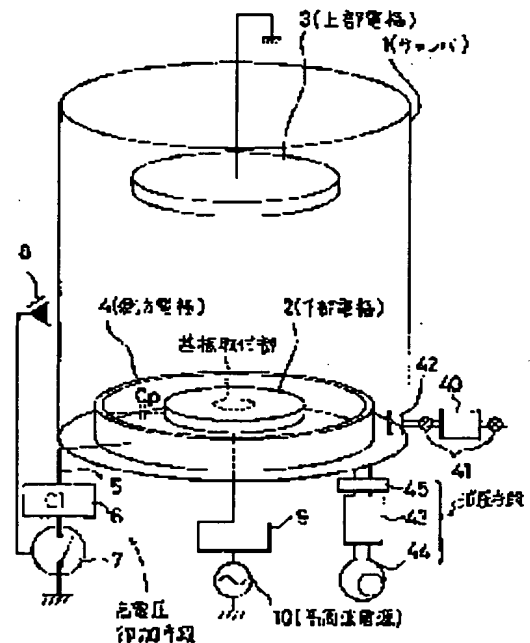
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## (54) METHOD AND DEVICE FOR GENERATING PLASMA

(57)Abstract:

PURPOSE: To provide a plasma generating device and a plasma generating method for generating plasma of high density further with good uniformity under a high vacuum.

CONSTITUTION: A lower part electrode 2 which is a voltage applying electrode connected to a high frequency power supply 10, upper part electrode 3 which is an earth electrode and a sideward electrode 4 capacitively connected between itself and the lower part electrode 2 are arranged in a chamber 1. After a pressure is reduced on a vacuum condition in the chamber 1 by a pressure reducing means, when high frequency power is supplied to the lower part electrode 2 from the high frequency power supply 10, a series resonance phenomenon is generated, and high voltage, hard to be generated by ordinary power supply voltage, is applied to the lower part electrode 2. Thus, a discharge is easily generated even in a high vacuum, to generate plasma. Since a mean free path is lengthened of an ion in the plasma in a high vacuum, a direction of the ion is arranged properly, to generate the plasma of high density further with good uniformity. In lieu of the sideward electrode, a resonance circuit containing a capacity element or the like may be provided.



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